

Patient: [REDACTED]
 Sex: Female
 Age: 26
 Height: 66 inches
 DOB: [REDACTED]
 Referring MD: [REDACTED]
 Referral Dx: PROXIMAL LEG WEAKNESS

STUDY DATE: 5-9-2003

Physician: [REDACTED]
 Test Date: 05/09/03

History/Comments:

This 26-year-old woman was evaluated by [REDACTED] for nerve conduction studies at Sturdy Memorial last week and found to have significant bilateral proximal leg weakness. She is referred today for additional nerve conductions and EMG testing. Her left arm and leg studies were relatively benign except for slightly prolonged sensory latencies in the left arm with normal amplitudes. EMG was not performed.

Her exam is significant for 4/5 proximal leg weakness, slightly brisk reflexes and slight increased tone and occasional fasciculations noted in the muscles. Her medical history is significant in that her family has all had Lyme disease due to their location (Old Lyme, CT) and her mother may have had Lyme disease when she was pregnant with the patient. The patient herself has never been diagnosed with Lyme disease.

Motor Nerve Study

Right Median Nerve

Rec Site: APB	Lat (ms)	Norm Lat	Amp (mV)	Norm Amp	Dist (mm)	C.V. (m/s)
STIM SITE						
Wrist	3.9	<4.2	7.8	>4.4	85	
Elbow	7.6		8.0		216	57.9

Right Peroneal Nerve

Stim Site: EDB	Lat (ms)	Norm Lat	Amp (mV)	Norm Amp	Dist (mm)	C.V. (m/s)
REC SITE						
Ankle	5.5	<5.7	3.8	>2.2	75	
Fib. Head	11.8		4.0	>2.2	335	53.8
Ankle	5.5		3.8		0	
Pop. Fos.	12.7		3.6		415	57.9

Right Tibial Nerve

Rec Site: AH	Lat (ms)	Norm Lat	Amp (mV)	Norm Amp	Dist (mm)	C.V. (m/s)
STIM SITE						
Ankle	5.7	<5.7	8.3	>2.8	7	
Pop. Fos.	13.2		6.4	>2.8	403	53.7

Right Ulnar Nerve

Rec Site: ADM	Lat (ms)	Norm Lat	Amp (mV)	Norm Amp	Dist (mm)	C.V. (m/s)
STIM SITE						
Wrist	3.5	<3.5	15.3	>5.6	65	
B. Elbow	6.8		14.3	>5.6	199	60.3
	3.5		15.3		0	
A. Elbow	7.0		14.3	>5.6	205	63.8

DOB: [REDACTED]

Sensory Nerve Study

Right Median Nerve						
Rec Site: Wrist	Lat (ms)	Norm Lat	Amp (uV)	Norm Amp	Dist (mm)	C.V. (m/s)
STIM SITE						
Palm	2.2	<2.2	89.6	>40	80	36.9
Index	3.4	<3.5	22.6	>10	130	37.9

Right Sural Nerve						
Rec Site: Ankle	Lat (ms)	Norm Lat	Amp (uV)	Norm Amp	Dist (mm)	C.V. (m/s)
STIM SITE						
mid calf	4.1	<4.2	16.0	>5	140	34.4

Right Ulnar Nerve						
Rec Site: Wrist	Lat (ms)	Norm Lat	Amp (uV)	Norm Amp	Dist (mm)	C.V. (m/s)
STIM SITE						
Palm	2.2	<2.2	27.9	<20	85	29.1
Ring	2.8		13.6		110	39.1

F-Wave Study

Right Median Nerve		
Rec Site: APB	Latency	
Stim Site: Wrist	ms	
M wave	3.83	
F wave	25.58	
F-M	21.75	

Right Peroneal Nerve		
Rec Site: EDB	Latency	
Stim Site: Ankle	ms	
M wave	5.50	
F wave	48.00	
F-M	42.50	

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Patient:

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EMG Study

Name	INS. ACT	FIBS	+WAVES	FASCICS	FIR. RAT	RECRUIT	CONFIG	EFFORT	TEXT
L. Deltoid	Normal								
L. Brachialis	Normal								
L. Ext.Dig.Com	Normal								
L. Dors.Int.1	Normal								
L. Abd.Pol.Br.	Normal								
L. Tibialis An	inc	none	none	occas	normal	irregu	normal	reduce	
L. Gastroc.Med	inc	none	none	none	normal	irregu	polyph	reduce	
L. Vastus Lat.	inc	none	none	none	normal	normal	normal	full	
L. Ext.Dig.Br.	inc+	none	none	occas	normal	normal	complx	full	
L. Iliopsoas	inc+			myokim	normal	irregu	simple	full	
CONTINUOUS CRDS AT REST									
L. Tens.Fasc.L	inc	none	none	occas	20-30H	irregu	mixed	reduce	
Adductor Ln	inc+	none	none	occas	normal	irregu	complx	reduce	
L. Gluteus Med	inc	none	none	infreq	normal	normal	normal	reduce	
L2-3 Parasp	Normal								
L. L3-4 Parasp	Normal								
L. L4-5 Parasp	Normal								
L. L5-S1 Parasp	Normal								
L. S1-2 Parasp	Normal								
R. Tibialis An	normal	none	none	none	normal	normal	normal	full	
R. Gastroc.Med	Normal								
R. Vastus Lat.	inc	none	none	infreq	30-40H	irregu	simple	reduce	
R. Ext.Dig.Br.	normal	none	none	none	normal	irregu	complx	full	
R. Iliopsoas	inc+	none	none	freqnt	30-40H	irregu	mixed	reduce	
frequent CRDs and unstable MU MUPs									
R. Adductor Ln	inc	none	none	none	normal	irregu	normal	reduce	
R. Tens.Fasc.L	normal	none	none	none	normal	irregu	complx	reduce	
R. Gluteus Med	Normal								
R. L2-3 Parasp	Normal								
R. L3-4 Parasp	Normal								
R. L4-5 Parasp	Normal								
R. L5-S1 Parasp	Normal								
R. S1-S2 Parasp	Normal								

Patient: [REDACTED]
DOB: [REDACTED]

05/09/03

SUMMARY

The right median and ulnar palmar and digital sensory latencies and amplitudes are normal. The right median and ulnar distal motor latencies, amplitudes, conduction velocities and F-waves are normal.

The right sural sensory latency and amplitude are normal. The right peroneal and tibial distal motor latencies, amplitudes, conduction velocities and F-waves are normal.

Concentric needle EMG was performed on both lower extremities and the left upper extremity and bilateral paraspinals.

The concentric needle EMG of proximal and distal muscles in the left upper extremity was normal. Lower extremity studies revealed remarkable changes in the left leg with nearly continuous CRDs at rest in the iliopsoas with, at times, myokymia as well as unstable motor units. When she does activate the muscle and she had pretty good effort, the motor units firing were simple. The right iliacus also showed frequent CRDs with unstable motor units and rapid firing poorly recruited MUPs. The patient had increased insertional activity without active denervation in all muscles tested in the left leg with chronic innervation noted in the left tensor fasciae latae and motor unit polyphasia or complexity in the left gastrocnemius and EDB and adductor longus. The paraspinals L2-S2 were normal on the left. On the right, the patient was noted to have rapid firing mixed or simple motor units in the vastus lateralis and iliopsoas with irregular firing and some polyphasic or complex MUPs noted in the tensor fasciae latae, the iliopsoas as mentioned and simple motor units in the vastus lateralis. The right gastrocnemius and gluteus appeared to be normal and paraspinals L2-S2 were normal on the right.

IMPRESSION

Combined with the study of May 2, 2003, nerve conductions of all four limbs and EMG of the left arm and both lower extremities reveal normal nerve conductions but evidence of significant neuropathic injury to the proximal leg muscles with some involvement of more distal muscles bilaterally. The most severe changes are in the iliacus bilaterally but the changes span multiple nerve roots. No significant evidence of active denervation was noted in any muscle except for relatively unstable motor units in the iliopsoas bilaterally. There were no myopathic features to the motor units or the firing rate. The lack of paraspinal denervation is concerning in a patient with multiroot level changes. However, the possibility of a multiroot neuropathic process, such as Lyme disease or leptomeningeal carcinomatosis, should be considered. This patient needs formal neurologic consultation and will probably need a nerve and muscle biopsy as well as spinal fluid studies. Her CPK was minimally elevated not consistent with a myopathy and rheumatologic workup has been pursued. She has been scheduled for follow-up appointment in the next two weeks. An MRI of the cervical spine and MRI of the lumbosacral spine with gadolinium are pending.

Thank you for the opportunity to provide electrodiagnostic consultation on this patient.

[REDACTED]

[REDACTED]